SHARP

# MATERIAL SAFETY DATA SHEET



Date Revised : Jun.1, 2007
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MSDS No. F-01221

## 1.PRODUCT AND COMPANY IDENTIFICATION

**Product Name** : AR-620NT/AR-620T/AR-620ST/AR-620ST-C/AR-620FT
AR-621NT/AR-621T/AR-621ST/AR-621ST-C/AR-621FT/AR-622ST-C ( Black Toner )

**Supplier Identification** : Sharp Corporation
22-22 Nagaike-cho, Abeno-ku, Osaka, Japan

Local suppliers are listed below. Please contact the nearest supplier for additional information.

| Area | (Country) | (Name and Telephone Number) |
|---|---|---|
| North America | U.S.A. | Sharp Electronics Corporation<br>Sharp Plaza, Mahwah, NJ<br>Telephone number for information : 1-800-237-4277<br>Emergency telephone number : 1-800-255-3924 |
| | Canada | Sharp Electronics of Canada Ltd.<br>Telephone number for information : 905-890-2100<br>Emergency telephone number : 1-800-255-3924 |
| Oceania | Australia | Sharp Corporation of Australia PTY. Ltd.<br>No1 Huntingwood Drive Huntingwood Blacktown N.S.W.<br>Telephone number for information : 1300-13-50-22 |
| Europe | Germany | Sharp Electronics (Europe) GMBH<br>Sonninstrasse 3, 20097 Hamburg<br>Telephone number to access MSDS : 040-2376-2185<br>For more information : 040-2376-2613 |
| | United Kingdom | Sharp Electronics (U. K.) Ltd.<br>Telephone number for information : 08705-274-277 |
| | France | Sharp Electronics France S.A.<br>Telephone number for information : 01-49-90-34-00 |
| | Austria | Sharp Electronics GMBH<br>Telephone number for information : 01-727-19-0 |
| | Italy | Sharp Electronics (Italy) S.P.A.<br>Telephone number for information : 02895951 |
| | Spain | Sharp Electronics (Espana) S.A.<br>Telephone number for information : 93-581-97-00 |
| | Netherlands | Sharp Electronics Benelux B.V.<br>Telephone number for information : 30-6359500 |
| | Sweden | Sharp Electronics Nordic AB<br>Telephone number for information : 08-634-36-00 |
| | Switzerland | Sharp Electronics(Schweiz)AG<br>Telephone number for information : 01-846-6111 |
| Middle East | U.A.E. | Sharp Middle East FZE<br>P.O.Box 17115 Jebel Ali, Dubai<br>Telephone number for information : 04-815311 |

## 2.COMPOSITION / INFORMATION ON INGREDIENTS

**Substance[ ]** **Preparation[X]**

| Ingredient | CAS No. | Proportion | OSHA PEL | ACGIH TLV | MAK-TWA | NOHSC-TWA |
|---|---|---|---|---|---|---|
| Polyester resin1 | Confidential | 45-55% | Not listed | Not listed | Not listed | Not listed |
| Polyester resin2 | Confidential | 30-35% | Not listed | Not listed | Not listed | Not listed |
| Carbon black | 1333-86-4 | 5-10% | 3.5mg/$m^3$ | 3.5mg/$m^3$ | Not listed | 3mg/$m^3$ |
| Iron oxide | 1309-38-2 | 1-5% | Not listed | Not listed | Not listed | Not listed |
| Polypropylene | Confidential | 1-5% | Not listed | Not listed | Not listed | Not listed |
| Charge control agent | Confidential | <2% | Not listed | Not listed | Not listed | Not listed |

## 3.HAZARDS IDENTIFICATION

**Most Important Hazards and Effects of the Products**

Human Health Effects : There are no anticipated carcinogenic effects from exposure based on animal tests performed using toner. When used as intended according to instructions, studies do not indicate any symptoms of fibrosis will occur.

Environmental Effects : Not toxic to aquatic organisms
[Estimated from the other product containing similar material]

**Specific Hazards** : Dust explosion (like most finely divided organic powders)

**Directive 1999/45/EC(Europe)** : Not classified as dangerous

## 4.FIRST-AID MEASURES

| Route(s) of Entry : | Inhalation? | Skin? | Ingestion? |
|---|---|---|---|
| | Yes | No | Possible but very unusual. |

**Inhalation** : Remove to fresh air. If symptoms occur, consult medical personnel.

**Skin Contact** : Wash with soap and water for 15 minutes or until particle is removed. If irritation does occur, consult medical personnel.

**Eye Contact** : Flush eyes immediately with water for 15 minutes. If irritation does occur, consult medical personnel.

**Ingestion** : Rinse with water and drink several glasses of water. If irritation or discomfort does occur, consult medical personnel.

## 5.FIRE-FIGHTING MEASURES

**Extinguishing Media** : Water, $CO_2$, foam and dry chemicals

**Special Fire Fighting Procedures** : None

**Fire and Explosion Hazards** : Toner material, like most finely divided organic powders, may form an explosive mixture.

## 6.ACCIDENTAL RELEASE MEASURES

**Personal Precautions** : None

**Environmental Precautions** : None

**Methods for Cleaning Up** : Wipe off with paper or cloth. Do not use vacuum cleaner when a large amount is released. It, like most finely divided organic powders, is capable of creating a dust explosion.

## 7.HANDLING AND STORAGE

**Handling**

Technical Measures : None

Precautions : None

Safe Handling Advice : Use of a dust mask is recommended when handling a large quantity of toner or during long term exposure, as with any non-toxic dust. Try not to disperse the particles.

**Storage**

Technical Measures : None

Storage Conditions : Keep container closed and Store in a cool and dry place.
Keep out of the reach of children.

Incompatible Products : None

## 8.EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering Measures**

Ventilation : Not required under intended use.

**Exposure Limit Values**

| | |
|---|---|
| OSHA-PEL(USA) | : 15mg/$m^3$ (Total Dust), 5mg/$m^3$ (Respirable Dust) |
| ACGIH-TLV(USA) | : 10mg/$m^3$ (Total Dust), 3mg/$m^3$ (Respirable Dust) |

**Personal Protective Equipment**

| | |
|---|---|
| Respiratory Protection | : Not required under intended use. |
| Hand Protection | : Not required under intended use. |
| Eye Protection | : Not required under intended use. |
| Skin Protection | : Not required under intended use. |
| Other Protective Equipment | : Use of a dust mask and goggles are recommended when handling a large quantity of toner or during long term exposure, as with any non-toxic dust. |

## 9.PHYSICAL AND CHEMICAL PROPERTIES

**Appearance**

Physical State : Solid Form : Powder Color : Black Odor : odorless

| | |
|---|---|
| **Ph** | **:** Not applicable |
| **Boiling / Melting Point** | **:** Not applicable |
| **Softening Point(°C)** | **:** 100 - 130 |
| **Flash Point(°C)** | **:** Not applicable |
| **Ignition Point(°C )** | **:** > 350 |
| **Explosion Properties** | **:** No data |
| **Density(g/cm³)** | **:** 1.1 (bulk density : 0.4) |
| **Solubility in Water** | **:** Negligible |

## 10.STABILITY AND REACTIVITY

| | |
|---|---|
| **Stability** | **:** Stable |
| **Hazardous Reactions** | **:** Dust explosion, like most finely divided organic powders. |
| **Conditions to Avoid** | **:** Electric discharge, throwing into fire. |
| **Materials to Avoid** | **:** Oxidizing Materials |
| **Hazardous Decomposition Products** | **:** CO, $CO_2$ and $NO_X$ |
| **Further Information** | **:** None |

## 11.TOXICOLOGICAL INFORMATION

**Acute Toxicity**

| | |
|---|---|
| Ingestion(oral) | : $LD_{50}$ > 2000mg/kg (Rats) |
| Inhalation | : $LC_{50}$ > 5.0mg/L |
| Eye irritation | : Not an irritant (Rabbits) |
| Skin irritation | : Not an irritant (Rabbits) |
| Skin sensitizer | : No sensitization |

**Mutagenicity** **:** Negative (Ames Test)

**Carcinogenicity** **:** In 1996 the IARC reevaluated carbon black as a Group 2B carcinogen (possible human carcinogen). This classification is given to chemicals for which there is inadequate human evidence, but sufficient animal evidence on which to base an opinion of carcinogenicity. The classification is based upon the development of lung tumors in rats receiving chronic inhalation exposures to free carbon black at levels that induce particle overload of the lung. Studies performed in animal models other than rats did not show any association between carbon black and lung tumors. Moreover, a two-year cancer bioassay using a typical toner preparation, where carbon black is bound in a resin matrix, demonstrated no association between toner exposure and tumor development in rats.

**Chronic Effect** : In a study in rats of chronic inhalation exposure to a typical toner, a mild to moderate degree of lung fibrosis was observed in 92% of the rats in the high concentration (16mg/$m^3$) exposure group, and a minimal to mild degree of fibrosis was noted in 22% of the animals in the middle (4mg/$m^3$) exposure group, but no pulmonary change was reported in the lowest (1mg/$m^3$) exposure group, the most relevant level to potential human exposures.

## 12.ECOLOGICAL INFORMATION

**Ecotoxicity**

On available data, toner is not harmful to aquatic organisms
[Estimated from the other product containing similar material]

## 13.DISPOSAL CONSIDERATIONS

**Waste from Residues** : Waste material may be dumped or incinerated under conditions which meet all federal, state and local environmental regulations.

**Contaminated Packaging** : Waste may be disposed or incinerated under conditions which meet all federal, state and local environmental regulations.

## 14.TRANSPORT INFORMATION

UN Classification : None
Not classified as hazardous for transport.

## 15.REGULATORY INFORMATION

US Information
TSCA(Toxic Substances Control Act) :
All chemical substances in this product comply with all applicable rules or order under TSCA.
SARA(Superfund Amendments and Reauthorization Act) Title III
302 Extreme Hazardous Substance : None
311/312 Hazard Classification : None
EU Information
1999/45/EC and 67/548/EEC
Symbol & Indication : Not required
R-Phrase : Not required
76/769/EEC : All chemical substances in this product comply with all applicable rules or order under 76/769/EEC.

## 16.OTHER INFORMATION

NFPA Rating (USA) : Health=1 Flammability=1 Reactivity=0
WHMIS Legislation (Canada) : This product is not a controlled product.
References

IARC(1996) : IARC monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans, Vol. 65, Printing Process And Printing Inks, Carbon Black and Some Nitro Compounds, Lyon, pp.149-261

H.Muhle, B.Bellmann, O.Creutzenberg, C.Dasenbrock, H.Ernst, R.Kilpper, J.C.MacKenzie, P.Morrow, U.Mohr, S.Takenaka, and R.Mermelstein(1991) Pulmonary Response to Toner upon Chronic Inhalation Exposure in Rats. Fundamental and Applied Toxicology 17, pp.280-299.

The information on this data sheet represents our current data and best opinion as to the proper use in handling of this product under normal conditions. However, all materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we do not guarantee that these are the only hazards which exist.